

### **3. REMARKS**

Applicant has amended Claims 23 and 36, as discussed below, and Claim 32 to correct typographical errors.

The Examiner allowed claims 32-35, rejected Claims 23-25, 27-31 and 36-39 under 35 U.S.C. §102(b) as being anticipated by Japanese patent application 02-011899 to Hayashi et al. ("Hayashi"), and rejected Claim 26 under 35 U.S.C. §103(a) as being obvious over Hayashi in light of U.S. Patent 4,884,820 issued to Jackson et al. ("Jackson"). In response, Applicant has amended independent Claims 23 and 36 to more clearly distinguish them over Hayashi. Applicant will also differentiate the present invention from the cited prior art in various ways to assist the Examiner.

In the present invention, as disclosed in the specification (Application, p. 6, lns. 17-20; p. 6, ln. 33 – p. 7, ln. 4) and as claimed in independent claims 23 and 36, the plates and tiles are attached to the fan blade in such a way as to provide for slight flexibility of the plates and tiles in relation to other plates and tiles. This is done to prevent cracking or fracturing of the tiles when the fan is subject to high torque. Nothing in Hayashi discloses or suggests attaching the plates or tiles to the fan blade in such a manner so as to enable the tiles and plates to move slightly in relation to each other. This feature, which is claimed in independent Claims 23 and 36 of the present invention, clearly differentiates the present invention over Hayashi.

Additionally, Hayashi explains that the numerous ceramic rectangles are arranged to form an irregular surface *only* in the corners of the liner (Hayashi, p.3, ln. 35 - p. 4, ln. 2). As shown in Fig. 2 of Hayashi, the plates on the bottom and sides of the channel are arranged to form regular patterns in the surface. Both the plates and corner tiles in the present invention

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are arranged to form irregular seam patterns, providing irregular seams along the entire length of the channel on the entire surface, as well as in the corners (Application, Figs. 3-8). Claims 23 and 36 as amended specify that the plates, as well as the tiles, are arranged to form irregular surface patterns. Nothing in Hayashi discloses or suggests arranging the plates and the tiles in such a manner so as to create irregular patterns on the surface of the blade to break up the flow of gas and particles across the surface of the blade. This feature, which is claimed in independent Claims 23 and 36 of the present invention, clearly differentiates the present invention over Hayashi.

Further, Hayashi describes a rotating fan and the use of numerous ceramic plates bonded to a channel-shaped liner, which is then secured to each blade in the fan with bolts and nuts (Hayashi, p. 3, lns. 23-26 and Fig. 1). In the present invention, the plates and tiles are *bonded* directly to the blade channel, or the plates are bonded to a substrate that is secured between the fan blade and plates. Regardless of whether or not a substrate is used in the present invention, nothing is secured to the blade with bolts and nuts, as in Hayashi. Thus, Hayashi does not fully anticipate or suggest the present invention, as disclosed and claimed.

The Examiner rejected Claim 26 under 35 USC 103(a) over Hayashi in light of Jackson, indicating that Jackson discloses using metal carbides in a labyrinth seal, and that it would have been obvious to combine the teaching of Jackson with that of Hayashi to use metal carbide to form a labyrinth seal in a fan blade assembly. Applicant respectfully believes that in light of the differentiation of the independent Claim 23, above from Hayashi, the rejection of dependent claim 26 over Hayashi in light of Jackson is moot.

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In light of the claim amendments and explanation above, it is respectfully requested that Claims 23 through 39 be allowed so that the application may be passed to issue for the reasons set forth herein and for other reasons clearly apparent.

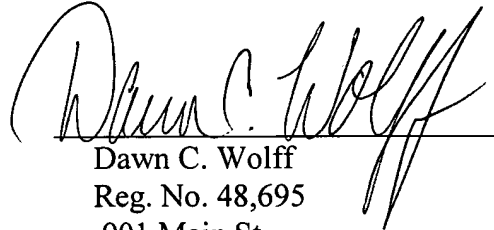
Enclosed is a check in the amount of \$395.00 for a Request for Continued Examination, which Request is also enclosed herewith. Applicant does not believe any additional fees are due; however, in the event that any such fees are due, the Commissioner is hereby authorized to charge any required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper to Deposit Account No. 50-2180 of Paul Storm, P.C. Should the Examiner have any questions or desire clarification of any sort, or deem that any further amendment is desirable to place this application in condition for allowance, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

STORM L.L.P.

Date:

1-5-05

A handwritten signature in cursive script, appearing to read "Dawn C. Wolff", is written over a horizontal line.

Dawn C. Wolff

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